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Research Article

Nursing Students' Experiences with Facilitator in Problem-Based Learning Class

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SUMMARY

Purpose: Problem-based learning (PBL) is now extensively utilized within contemporary nursing education. This study was done to explore the nursing students' experiences with facilitators in PBL classes as they transitioned from the first package to the fourth package during the entire sophomore year.

Methods: Twelve nursing students who had taken the course were interviewed after PBL classes. Data were analyzed using dimensional and comparative analysis based on Strauss and Corbin's grounded theory.

Results: Findings were organized into phases of participants' experiences with facilitators during PBL classes. They faced interpersonal relationship challenges with facilitators as they moved through the three phases of the continuum: feeling uneasy, overcoming the uneasiness, and valuing the help of the facilitator. In the beginning, uneasiness resulted from proximity to the facilitator. However, seven strategies were derived to respond to the uneasiness during the continuum: (a) searching for information about the facilitator, (b) making efforts to build a positive impression with the facilitator, (c) wanting facilitation, (d) weighing own experiences with facilitator against others' experiences, (e) following facilitator's guidance, (f) reflecting on facilitation experience, and (g) retaining facilitator's remarks.

Conclusion: Participants overcame the uneasiness and accepted the facilitator as an advisor. These results are significant in providing optimal facilitation for students in PBL classes because they are based on the PBL participants' perspectives of facilitation. Further studies related to facilitators' experiences in the PBL are recommended.

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Introduction

Nursing is a practical discipline focused on solving health-related problems by diagnosing human responses using the nursing process. In the current healthcare system, where quality of nursing service is emphasized, nursing education needs to respond to the demand for nursing quality. Furthermore, [Korean Accreditation Board of Nursing Institute \(2012\)](#) has not only set core competencies of nursing and nursing education goals recently, but also announced accreditation criteria for evaluation of nursing education in Korea. Two of the seven competencies of graduate nurses included integrating nursing knowledge into practice to provide holistic care and critical thinking ability to solve nursing problems in the healthcare system (Korean Accreditation Board of Nursing). They imply graduate nurses should be trained to meet

these competency qualities, especially integrating nursing knowledge into nursing practice.

However, there are many barriers to meet such requirements for nursing students because of patients' expectations of proficient nursing practices and emphasis on hospital accreditation criteria. Thus, nursing students have many limitations and obstacles to practice direct nursing care during clinical courses ([Broussard, Myers, & Lemonie, 2009](#)).

Problem-based learning (PBL) is now extensively utilized within contemporary nursing education to assist students to integrate nursing theory into practice ([Johnston & Tinning, 2001](#)). PBL promotes critical thinking, self-directed study and problem solving by using scenarios related to certain health conditions ([Son, Choi, & Song, 2009](#)). [Choi \(2004\)](#) found that problem solving ability and clinical reasoning of students have significantly increased after PBL courses.

The role of the facilitator in PBL courses is to help the group approach and identify concepts, to formulate open-ended questions that encourage group discussion, to assist the group in identifying their learning issues and what they need to do research on ([Duch, Groh, & Allen, 2001](#)). The aim of facilitation in PBL courses is

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to help students discover the needed information for themselves rather than answer questions or provide lectures. The facilitator keeps the group focused on their tasks and guides them to achieve their goals. The importance of a facilitator's role and the methods to train facilitators have been studied (Azer, 2005). A significant positive correlation between tutor facilitation and academic achievement was identified by Hawkins, Hertweck, Larid, Sekhon, and Kortyna (2007). Kang, Kang, Choi, and Um (2008) found that the capability of the facilitator significantly affected the self-directed study ability and the quality of the students' interaction. Thus, the role of the facilitator in the PBL is influential and important. In order to run PBL effectively, facilitators' productive and successful facilitation is crucial (Duch et al., 2001; Farmer, 2004). Kim, Yoon, and Hyoun (2009) also reported the importance of the facilitator's role in giving feedback for the group's enthusiasm and confidence in the PBL classes.

However, until now, most studies have focused on the effect of PBL on the students (Hyoun, Cha, & Jang, 2011; Kang et al., 2008; Murad, Doto-Yglesias, Vahey, Prokop, & Murad, 2010; Yang, 2006). There has been little research on students' experiences with facilitators in PBL. Studying students' experiences with a facilitator will provide information that may help facilitators in PBL courses. Therefore, we applied a grounded theory approach to uncover the participants' experiences as they transitioned through the PBL process with a facilitator. Based on the results of this study, a facilitator can develop facilitation strategies and to regulate the amount of facilitation as PBL courses progress.

Methods

Study design

This study utilized Strauss and Corbin's (1990) grounded theory research methods for data collection and analysis.

Setting and sample

Twelve nursing students who had taken the course were interviewed after each PBL class from March 2012 to November 2012. They participated in 2-credit-hour courses over two semesters in their sophomore year in the college of nursing. The name of the course is PBL, and covers scenario concepts including nursing ethics, hygiene, inflammation, hospice, nutrition, health maintenance and therapeutic communication. Members of each group were assigned by their student number to meet the size of PBL class: 8–10 students for each group. One facilitator for each group was appointed randomly by the director of the nursing department. A total 12 participants (1 from each group) were selected randomly from the 12 groups. The age of the participants ranged from 20 years to 25 years ($M = 21.5$).

The course was mandatory for sophomore nursing students who had no previous experience with a PBL course. During the first PBL class, they watched the PBL orientation video explaining the whole process and left for the designated classroom with randomly assigned faculty. All facilitators started the class simultaneously. The PBL class was run based on the PBL syllabus. One package usually took 6 weeks. The package consisted of the syllabus, scenarios and objective data related to the scenarios. Four packages were completed during the sophomore year. All facilitators were faculty members whose facilitation experience varied from 1 year to 10 years.

Ethical consideration

All participants consented to participate in this study with the approval of the institutional research review board in the nursing

school where the researcher belongs. Written consent was obtained from each participant. They were given written contracts that stated they could refuse to participate at any time prior to the start of the first interview.

Data collection

Qualitative data were collected through multiple in-depth interviews conducted by one of the researchers. Semistructured interview questions were used to explore the experiences with the facilitator in PBL classes. Participants were asked the following questions: (a) What was your experience like with the facilitator in the PBL classes? (b) How did you interact with the facilitator?

Interviews were conducted in the student service area without any noise or interruption. Interviews lasted from 30 minutes to 1 hour. The author tried to select participants from each group. Interviews were audio-taped; significant and meaningful statements were recorded by the researcher. The audio-taped interviews were transcribed verbatim. During interviews with the 12 participants, the author focused on participants' interaction with the facilitator and on noting movement, sequence and changes in need of facilitation during PBL classes.

Data analysis

The transcripts of the audio-taped interviews were read by all researchers. Researchers gathered once a week to collaborate on data analysis and review data. We coded data according to Strauss and Corbin's (1990) grounded theory. We carefully read the transcripts multiple times and categorized the participants' experiences into three phases: feeling uneasy, overcoming uneasiness, and valuing the help of the facilitator. During the process of data analysis, we discussed and shared our thoughts on the collected data to explore the interactions between the facilitators and the participants, and traced the interaction over time to note any changes. We also traced how changes in interactions took place or what caused them to remain the same despite the changes in structural conditions by asking the following questions: What is the process? Why is it such an important part of our analysis?

Research method was sufficiently rigorous through the application of verification, validation and validity (Meadows & Morse, 2001). Verification was attained by going through literature reviews, adhering to the grounded theory, keeping field notes, memos and reflective journals on our decision trail. Validation was fulfilled through crosschecks by coauthors, data analysis by other qualitative researchers, reviews by participants and audit trails. Validity, one of the primary goals of this research, was based on credibility and external reviews. A native English-speaking professor and a Korean English teacher validated the translation of this study from the Korean language to English.

Results

As study participants moved through the continuum of students' experience with the facilitator in PBL from the beginning to completion, their experiences were categorized into three phases: feeling uneasy, overcoming the uneasiness and valuing the help of the facilitator. Important statements were also categorized into each phase of the continuum. To categorize the participants' experiences, repeated readings and reflections were done on participants' statements and observations. The quotes are labeled with (P) for participant followed by participant number. These phases are illustrated in Table 1.

Table 1 Nursing Students' Experiences with Facilitators during the Three Phases

Phase	Category	Theme
Feeling uneasy	Searching for information about the facilitator	Feeling very uneasy
	Wanting facilitation	Learning their facilitators' styles from seniors
Overcoming uneasiness	Making efforts to build a positive impression on the facilitator	Having strong thirst for facilitator's guidance
	Weighing own experience with facilitator against others' experiences	Wanting detailed introductions to PBL from facilitator
	Following facilitator's guidance	Behaving with awareness of score in presence of facilitator
		Volunteering for learning issues assignments
Valuing the help of the facilitator		Sensing facilitator's favorite desirable learning attitude
		Reviewing facilitator's responses
		Staying more attentive in the class
		Following the ground rules
	Reflecting on facilitation experience	Getting involved in teamwork more actively
		Being irritated by facilitator not noticing negligent members
		Accepting the facilitator as a part of the group
		Having feelings of fulfillment and regrets at the facilitators' feedback on the final report
	Retaining the facilitator's remarks	Sustaining acquired strength from the facilitators' facilitation

Note. PBL = problem-based learning.

Phase 1: Feeling uneasy

Phase 1 occurred when participants began the PBL after a brief orientation on PBL class without much understanding. The findings showed that the participants felt uneasy about the facilitator in this phase. The participants experienced very high levels of anxiety, stress and uneasiness. Most of the participants had limited experiences being close to the faculty member, so they were very uneasy with the situation in which all their actions were scrutinized by facilitators.

Searching for information about the facilitator

They searched not only for senior students' advice on how facilitators had run the class before but also facilitators' responses during PBL. They also searched for information regarding the facilitators' preferred classroom atmosphere, presentation styles and learning attitudes from students. This information helped them have a sense of psychological safety with which they could attend the class with low risks of embarrassment or failure. They gathered information about the facilitators by contacting juniors who had experienced the situation before. Juniors offered good support for them to reduce the high anxiety. They behaved according to juniors' advice on the PBL class.

They had to present their homework in the presence of the facilitator. The pressure caused by the presence of a facilitator compromised their speaking ability to present their homework or opinions articulately. With the stress of unfamiliarity with the PBL class format and proximity of facilitators in the class, the participants felt uncomfortable. Participants stated the following:

Juniors told me to summarize reports and apply them to the scenario instead of reading them because the facilitator preferred short and clear presentations, it helped us. (P. 5)

Sometimes we try to read off cues from facilitator's face to see if we are doing right or not. (P. 9)

All my classmates were anxious and uneasy about having facilitator very close in the classroom. (P. 2)

Wanting facilitation

The PBL class syllabus did not affect participants' confidence or understanding of PBL class. In addition, the brief orientation on the PBL process did not provide enough information to identify key concepts well. A few of the facilitators were in the class without active involvement, rarely gave comments or suggestions.

Participants did not fully understand the homework assigned to them, so they could not understand the given scenario and the implication of studied concepts. Sophomore year in nursing meant that their level of nursing knowledge was not developed enough to search for relevant information by themselves. Thus, they wanted more direct facilitation from their facilitators during this phase. During discussion of the scenario, finding cues and searching for learning issues with poor confidence in their collected information, some of participants wanted advice from their facilitator but most participants were too shy to ask the facilitator. Also, the participants felt very insecure about their work when they realized that they did not fully understand the key concepts. They often ended up gathering too much irrelevant information. It was the first phase during which the participants needed facilitator's active facilitation the most. With participants' lack of confidence in their collected information and a poor understanding of their homework, they wanted direct facilitation in the class. Participants stated the following:

I am not used to visiting facilitator to ask for advice at her office. (P. 2)

We need a lot of facilitator's advice because we don't know if we are heading in the right direction. (P. 8)

Making efforts to build a positive impression on the facilitator

Some participants volunteered for homework. Also, they contributed to the learning atmosphere by being attentive and proactively involved in discussions. When they researched the learning issues or shared their opinions on finding cues, or reviewed the scenario during the class, they tried hard to follow the facilitator's favorite ways based on juniors' advice. This was because they were aware of being graded by the facilitator. During the presentation of their learning issues, they were too nervous to do it well. Some participants cried over the mistakes they made during the presentation because they were worried about getting a poor score. Their anxiety during the presentation was expressed in the following statements:

I practiced the presentation material at home but I did badly I think. (P. 1)

My lips got frozen when it was my turn to share searched learning issues. (P. 11)

The facilitator seems to be watching every bit of our behaviors. What if I end up with a bad grade? (P. 4)

However, some anxiety from the PBL was alleviated somewhat by facilitators' encouragements. Facilitators' gestures such as nodding or smiling, during PBL classes did help the participants relax. In those times of anxiety and uneasiness, junior's PBL experiences, advice, team-members' support and facilitator's comments helped them be optimistic. Their focus was how to build good rapport with team members and facilitators. Many participants in the study did not stay in this phase for long. The length of the first phase ranged from 2 to 3 weeks with an average of 2.5 weeks.

Phase II: Overcoming uneasiness

Once the participants had interacted with the facilitator, their uneasiness decreased and they also began to look ahead to the next topic of study. They also focused on how to learn more from their facilitator. They performed every task required to make the relationship with the facilitator better which resulted in a more active classroom. They listened to the facilitator's advice and guidance, and visited the facilitator outside of the class schedule. The participants appreciated a timely and respectful facilitation by the facilitator.

Weighing own experiences with facilitator against others' experiences

In the beginning of the PBL class, some participants blindly believed junior's opinions of certain facilitators without actually verifying their claims. As the PBL course evolved they established their own evaluation of their facilitators after a few PBL classes. The participants' own experiences became a more reliable basis for evaluating facilitators. After the PBL classes, participants shared their opinion on their facilitator's reactions, comments and attitudes. But they interacted with the facilitator personally during and after the PBL class, their preconceptions of their facilitator were often changed positively or vice versa. They tried to form their own opinions of their facilitator by engaging in discussions, presentations and visiting the facilitators.

In addition, some of the participants tried to meet the explicit expectations of the facilitator by being more attentive in class, focusing on learning the issues during discussion instead of talking amongst themselves, being more mindful of making contributions in the class and being involved in team work more actively. During this period, facilitator's evaluation role was prominent for the participants. Some facilitators were watching the participants' learning activities without giving much advice on their study unless they were asked. Thus the participants tended to read facilitator's face to see if they were satisfied with participants' group work, information integration and the ways they discussed the scenario. This is illustrated in the following statements:

When we saw the facilitators had a smile on their face, we became relaxed. We were just reading the facilitator's face to see if we are doing it right or not. In my opinion, it is time when we need more directive facilitation. (P. 8)

I think she must not like me because whenever I had a presentation she always points out my mistakes, it frustrates me. (P. 12)

During our presentation, when she frowned or did not smile, it implied that we did a poor job. My team did not do well. (P. 10)

Following facilitator's guidance

The facilitator emphasized the group working together to solve the cues in the scenario and checked each participant's

contributions during the group learning activities. These facilitations promoted not only the group morale but also feelings of group belonging. The participants willingly volunteered for group work to show their enthusiastic study attitude. Some participants stated they were impressed and touched by the facilitators' thoughtful facilitation of their group dynamics. The facilitators' thoughtful comments, advice and encouragement instilled enthusiasm and made the participants more attentive. The participants said the following about being moved by the facilitators:

She called in a few of my group members to tell us her expectations for our group and even showed us the final report of the previous PBL team. (P. 4)

She brought some snacks and told us we are doing well but more effort would be needed. (P. 7)

However, the participants did not appreciate abundant instructions from the facilitator or a very demanding facilitator. They preferred having timely correction or direction. When the participants were scolded or embarrassed they tended to lose interest and discussion tended to slow down. The demanding facilitators asked the participants to attend a conference held by the nursing academic society 3 hours drive away or gave advice in the middle of members' presentation. Some of the facilitators gave too much of their opinion during classes. It resulted in the students' inability to think for themselves. However some facilitators were too quiet and gave too little advice so that the participants wandered a lot while doing research on learning issues. This kind of facilitating style led participants to become sensitive in reading the nonverbal communication of the facilitator. For such facilitators, the participants wanted them to facilitate the group dynamics and to stimulate contributions for a better study flow. Most of the participants adapted to having a facilitator around them and to getting feedback directly during the class. However, they prefer having lectures to PBL classes if possible. This phase typically began near the end of the second week of PBL and continued through much of PBL classes. The average length of this stage was lasted from the third to the fourth week. The following statements were representative comments expressed by the participants:

It frustrates me when my facilitator jumps into our presentation before I was finished. (P. 9)

Sometimes she points out my mistakes in front of my group, it embarrasses me. (P. 6)

My facilitator reads atmosphere well when we seemed to miss core concepts she does help us to focus on the core concepts. (P. 2)

We felt shocked, she never let go of any mistakes, she scrutinized our presentation. (P. 8)

She was too enthusiastic to ask us to attend conference of nursing academic society held three hours away from the University, she even asked us to bring the certificate from there. We reluctantly did it but it was too much for us with our busy study schedules. (P. 10)

Phase III: Valuing the help of the facilitator

It was the fifth week, which was around the end of the first package, participants prepared their final reports and presentation. Closing the first PBL package was highly anticipated for participants because of the frequent group meetings to do homework in spite of their tight class schedules and extracurricular activities. They felt

some relief although they will have more packages to do in the sophomore year. They remembered the facilitator's remarks while preparing for their final reports. The more they experienced PBL, the more they realized the facilitator was their resource person and visited the facilitator more often for advice. They reflected that some facilitators guided them to use participants' knowledge to construct their own flow and to provide reasoning behind participants' opinions instead of giving the answers.

Reflecting on facilitation experience

The participants used facilitator's comments or suggestions given during or after each presentation as reference for the next presentation class and for other PBL packages. Also when facilitators gave negative feedback, the participants tried harder to do better the next time by remembering negative feedback or vice versa. They did not want to make a bad impression on the facilitators because it might negatively influence their final academic score. From the participants' perspective, punctual facilitation was necessary to make the PBL class progress smoothly but this opinion was never told directly to the facilitator. In fact, some participants were sorry that the facilitator waited until the last minutes of the presentation when asking the participants to correct the final report. In those cases the participants became very frustrated. They realized they had no choice but to accept her late correction requests. The resentfulness was expressed in the following statement: "When she asks us to add more information to our final reports, we have to say 'yes' without any complaints. It would have been nice of her to give us advice in advance." (P. 6).

However, some participants had good feelings toward their facilitator who encouraged teamwork or noticed the team members who contributed to the discussion in a productive way during the PBL classes. The participants were highly motivated by such facilitations. In fact the participants hoped meeting attendances and contributions for the group work after the classes were included as a measure of grading. One participant made the following comment: "Some group members hardly make contributions for meetings after class but participate in front of the facilitator during PBL classes. The worst part is that the facilitator praises them." (P. 4).

In the later phase, the facilitator was of big help in allowing the participants' class to flow smoothly. The participants valued the facilitator in creating a collaborative learning atmosphere by encouraging further data collection and integrating research data, reminding them of the ground rules and recognizing well-done homework. During the final phase, they felt more comfortable in visiting the facilitator for comments or advice on their homework. They also realized having facilitators available for advice and ongoing feedback of their homework on learning issues during and after PBL class was very helpful. In addition, some participants expressed that after two packages were done, they thought they could do well in the PBL class without much facilitation. But after a long break, the summer vacation, they still needed facilitators' advice, but not as much as during the first package.

Retaining the facilitator's remarks

The participants experienced feelings of fulfillment and sadness at the facilitator's feedback on the final report. Some of the facilitators' were very critical and hardly recognized their efforts and contributions. The participants longed for the facilitators to recognize how hard they tried, instead of focusing on mistakes. Very critical feedback from the facilitator neither helped the participants to build feelings of trust among group members nor improved study efficiency. It resulted in blaming group members who had made mistakes. However, feedback from facilitators was essential for the participants to learn PBL and their strengths and

shortcomings. There were two ways of responding to negative feedback. First, some participants visited the facilitator seeking advice or their counselor asking how they should behave. For those active participants, negative remark helped them correct their mistakes. Second, some participants were too discouraged to try any further. The facilitators' positive closing remarks on overall evaluation of the PBL including refreshing the purposes of the PBL class allowed good self-assessment and motivation for further PBL classes. Clearly, soliciting negative remarks may be vital to the participants' continued growth and effectiveness. But over the course of the PBL, the facilitators' sensible and timely advice, and feedback with recognition of the participants' efforts really helped motivate them make changes for the next PBL class. After they submitted the final report and presented it in the PBL class they felt it was rewarding and could do better for the next package. Their comments on a good or unhelpful facilitation was expressed in the following statements:

In the final presentation, she focused on nursing diagnosis not on whole report. She hardly recognizes my effort. (The participant cried. P. 4)

She encouraged us saying you will be better on next PBL class, she even brought snacks for the final presentation class. (P. 6)

Discussion

The experiences of the participants in this study were mainly based on facilitation, relationship and guidance given by the facilitators during and after the PBL classes as it evolved rather than experiences of the PBL classes. Participants were used to having lectures in the classes with more than 12 students. In the study, PBL class size was limited to 10 students and 1 facilitator. The participants faced challenges as they moved through the PBL continuum from feeling uneasy, overcoming uneasiness and finally to valuing the help of the facilitator. Findings from this study provided vivid examples that participants neither had a good understanding of the PBL nor what to expect from the facilitator. In fact, they were unprepared to assume the role required to meet the goals of the PBL package to which they were committing. The goals of PBL such as developing critical thinking skills, self-directed learning, self-evaluation, interpersonal communication, and access and retrieval of information in nursing practice (Chunta & Katrancha, 2010) could be accomplished if the facilitator focused on the process rather than the group's output (Nelson & McFadzean, 1998). Additionally, Hawkins et al. (2007) found the role of the facilitator was to promote effective group functioning, to create a student learning environment and to encourage the development of students' awareness of their clinical reasoning process. The facilitator should work to meet the participants' perceived needs during the PBL and not merely the facilitator's needs during the three phases. First of all, during the phase of "feeling uneasy", participants tried to learn more about how PBL works and the facilitators' facilitating styles.

Having the facilitator working very closely with the PBL group in the classroom made the participants feel uneasy and self-conscious. For participants, this meant not only being monitored on their every behavior but also being evaluated based on their study attitudes. These feelings might be influenced by traditional teacher-pupil relationship culture where while the students walk with the teacher, they should walk behind the teacher at enough of a distance but not to step on their shadow. This view of facilitator among the participants reflects the filial piety from Confucianism. Today, this belief is weakening but still has an influence on the participants.

In this study, by repeatedly reviewing the participants' statements, we could not exclude the idea that participants' greatest concern during PBL class was grading. This was validated through student perceptions in derived themes: "behaving with awareness of a score in presence of facilitator", "reviewing facilitator's responses" and "having feelings of fulfillment and regrets at the facilitators' feedback on final report". These results imply that explicit explanation about grading and grading tools during orientation and in the beginning of the second class of the PBL course by the facilitator might lessen uneasy feelings between the facilitator and students. Also, grading based on process evaluation (as 80% of the process score is based on self and peer evaluation) and discussion might help the participants focus on group activities and learning issues more (Kim et al., 2009; Yang, Cha, Jang, & Hyung, 2010).

Some of the participants were irritated by the facilitator not noticing negligent team members. Moreover, some of the participants who were reluctant to participate in group study activity after the class seemed to talk a lot about irrelevant topics. Some strongly opinionated participants talked more without giving sufficient thoughts to the scenarios and learning goals while only to make a good impression on the facilitator. These behaviors sometimes directed group thinking in the wrong direction. Thus, participants wanted facilitator to apply vigorous interventions to prevent the class from being dominated by strongly opinionated members. Also, Nelson and McFadzean (1998) suggest that the facilitator needs to recognize reluctant learners and help them think in a plurality of perspectives so that students can capture and integrate these perspectives for mutual consideration and debate. This result suggests that the facilitator needs to facilitate the social process within groups.

In addition, facilitators need to understand group dynamics and promote group dynamics or they may weaken the learning process (Peterson, 1997). Furthermore, Azer (2005) notes that these kinds of behaviors are related to group dysfunction, which suggests that the facilitator needs to remind students of the ground rule, "We should listen to one another or bring the discussion to the white board." In the study, participants appreciated that some of the facilitators actually encouraged the class members to contribute and to interact by reminding them of the ground rules of sharing opinions and taking turns to talk.

Most of the study participants wanted the facilitator to actively guide their study especially in the initial phase when they did not know much of PBL and the facilitator's disposition. The participants experienced strong thirst for facilitator's guidance during the "uneasy" phase. The participants stated, "We want the facilitator to give us advice and feedback on how we are doing and if we are on the right tract or not, she let us wander too much"; "Reflecting upon PBL classes, we needed facilitator's guidance the most during the first package, she hardly gave us guidance so we missed things a lot in the beginning." The amount of facilitation needed fluctuated throughout the three phases of feeling uneasy, overcoming uneasiness and valuing the help of the facilitator. The more packages the participants studied the less facilitation they needed. However, it is noteworthy that whenever a new scenario was introduced or after a long break such as a vacation, the level of facilitation needed increased but not as much as during the first package. When students needed facilitation the most was while they were struggling to adjust themselves to a new learning method, nursing concepts and an unfamiliar facilitator during the "feeling uneasy" phase. It is recommended that a facilitator takes a neutral position to encourage full group participation. This did not mean that facilitators should not express their opinions (Peterson), but that guidance should be given mostly when participants have little knowledge of PBL itself and its study concepts. The participants' readiness for PBL is important according to Hersey, Blanchard, and

Johnson (2001). Any leader behavior may be more or less effective depending on the readiness level of the person in the PBL class. Thus the facilitator should help PBL participants grow in readiness as far as they are able and willing to go. This development of participants should be done by adjusting the amount of facilitation through PBL orientation, reviewing the study plan and ground rules they set at the first PBL class. The participants complained about the timing of facilitation such as, "We gathered much information not related with the actual problem", "We wandered quite a lot, we were exhausted but the facilitator stayed quiet", "The worst facilitation is she had been quiet until the last minute then she asked us to correct the final output. It drives us nuts." These results are supported by the study of Nelson and McFadzean (1998). They noted that in the first two packages, expert facilitation unleashes a group's creative energy and knowledge that otherwise may remain untapped, this enabled the group to find more problem solutions. As the main purpose of using PBL is to develop critical thinking, communication and teamwork skills in variety of settings, it is very important for the facilitators to recognize the best time to provide facilitation and to regulate the amount of guidance. In the authors' opinion, the years of experience as the facilitator, the students' nursing knowledge, willingness, group dynamics and competency of self-directed study should be considered in deciding the timing and type of facilitation to provide. Kang et al. (2008) found that facilitation strategies helped students become active learners so that the amount of interaction in class increased. According to Murad et al. (2010), self-directed learning may be more effective in the advanced learner, especially when learners were involved in identifying their learning resources. They should consult the facilitator and determine the methods and resources that best fit their learning style and the class objectives. The study (Murad et al.) suggests that facilitators need to help students find the best fitting learning material for the PBL class concepts instead of letting participants learn by trial and error. In order to promote PBL team building, collaboration and communication, using internet websites can be an alternative for saving time for both parties. In the study by Hyoung et al. (2011), the application of Wiki-based collaborative learning strategies on blended-based PBL using online spring note encouraged the facilitator and students to collaborate and communicate. In the participants' perspective, with their busy academic schedule using internet correspondence can be an alternative to promoting mutual correspondences. Participants stated that, "Using spring note on the internet in my group helped us save time and energy. Actually it promoted correspondence among facilitator and team members." But the results of the study cannot be generalized to all nursing students because participants were selected from one nursing department in the city.

Conclusion

This study is a qualitative study of experience with facilitators from 12 nursing students who had taken the PBL courses during their sophomore year in nursing school. The authors explored how participants adapted to the facilitator during three phases: (a) feeling uneasy, (b) overcoming uneasiness, and (c) valuing the help of the facilitator. The strategies the participants used during each phase were as follows for the three phases respectively: (a) searching for information about the facilitator's styles, making an effort to build a positive impression on facilitator and wanting facilitation; (b) weighing own experience with facilitator against others' experiences and following facilitator's guidance; (c) reflecting on facilitation experience and retaining the facilitator's remarks. The authors noticed that the participants wanted the facilitator to be aware of and be sensitive to the amount of facilitation needed during each phase, their level of understanding of

the PBL class and knowledge of PBL learning concepts. Also they valued timely facilitation and correction of dysfunctional activities among the participants to make the most of the PBL and be more productive during those phases. Therefore, the results of the study have implications for building strategies for facilitators on how to operate the PBL class more effectively. Also the facilitator should take into full consideration their students' readiness, willingness, ability and the group dynamics necessary for students to achieve their learning goals of PBL effectively. The study results showed the amount of facilitation needed fluctuated throughout the three phases. The facilitator will learn when to regulate the amount of facilitation as PBL courses progress. Integrating the results of this study into developing programs for successful group facilitation and for a novice facilitator will help facilitators run the class with more confidence and more effectively. Further study is needed to develop a comprehensive, student-tailored guidebook to educate the facilitators and a PBL orientation book for students to enrich their PBL experiences.

Conflict of interest

The authors declare no conflict of interest.

References

- Azer, S. (2005). Challenges facing PBL tutors: 12 tips for successful group facilitation. *Medical Teacher*, 27(8), 676–681.
- Broussard, L., Myers, R., & Lemonie, J. (2009). Preparing pediatric nurses: the role of simulation-based learning. *Issues in Comprehensive Pediatric Nursing*, 32(1), 4–15. <http://dx.doi.org/10.1080/01460860802610178>.
- Choi, H. J. (2004). The effect of PBL (problem-based learning) on the metacognition, critical thinking and problem solving process of nursing students. *Journal of Korean Academy of Nursing*, 34(5), 712–721.
- Chunta, K. S., & Katrancha, E. D. (2010). Using problem-based learning in staff development: strategies for teaching registered nurses and new graduate nurses. *The Journal of Continuing Education in Nursing*, 41(12), 557–564.
- Corbin, J., & Strauss, A. (1990). *Basics of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Duch, B. J., Groh, S. E., & Allen, D. E. (2001). *The power of problem-based learning: a practical 'how to' for teaching undergraduate courses in any discipline*. Sterling, VA: Stylus Publishing.
- Farmer, E. A. (2004). Faculty development of tutor skills for problem-based learning. *European Journal of Dentistry Education*, 8, 59–66.
- Hawkins, S., Hertweck, M., Laird, J., Sekhon, L., & Kortyna, D. (2007). The effect of experience vs. novice problem-based learning facilitators on student outcomes. *The Journal of Physician Assistant Education*, 18(4), 63–68.
- Hersey, P., Blanchard, K. H., & Johnson, D. (2001). *Management of organizational behavior*. Upper Saddle River, NJ: Prentice Hall.
- Hyoun, H. K., Cha, Y. N., & Jang, H. S. (2011). On application of wiki-based collaborative learning strategy on blended-based PBL using online spring note. *Jesus University Journal of Nursing*, 9(1), 21–33.
- Johnston, A. K., & Tinning, R. S. (2001). Meeting the challenge of problem-based learning: developing the facilitators. *NURSE Education Today*, 21(3), 161–169.
- Kang, M. H., Kang, J. H., Choi, H. S., & Um, S. Y. (2008). The effects of learners' perceived role of a tutor on interaction and learning outcomes of problem-based learning in medical education. *Research of Education Science*, 39(3), 1–25.
- Kim, K. J., Yoon, J., & Hyoun, H. K. (2009). Analysis of problem based learning based on the self-reflection journals and class evaluation of nursing students. *Journal of Korean Academy of Fundamental Nursing*, 16(4), 438–448.
- Korean Accreditation Board of Nursing Institute (2012). *Guidelines for nursing department accreditation*. Seoul: Korean Accreditation Board of Nursing Institute.
- Meadows, L. M., & Morse, J. M. (2001). *Constructing evidence within the qualitative project*. Thousand Oaks, CA: Sage Publications.
- Murad, M., Doto-Yglesias, F., Vakey, P., Prokop, L., & Murad, A. (2010). The effectiveness of self-directed learning in the health professions education: a systematic review. *Medical Education*, 44, 1057–1068.
- Nelson, T., & McFadzean, E. (1998). Facilitating problem-solving groups: facilitator competencies. *Leadership and Organisation Development Journal*, 19(2), 72–82.
- Peterson, M. (1997). Skills to enhance problem-based learning. *Medical Education Online (Serial Online)*, 2, 3. Retrieved October 15, 2012, from <http://www.med-ed-online.org/f0000009.htm>.
- Son, Y. J., Choi, E. Y., & Song, Y. A. (2009). Effects of a problem-based learning program on health education for elders. *Journal of Korean Academy of Nursing*, 39(2), 207–216. <http://dx.doi.org/10.4040/jkan.2009.39.2.207>.
- Yang, B. S. (2006). A study on the adapting process of nursing students to problem based learning. *Journal of Korean Academy Nursing*, 36(1), 25–36.
- Yang, B. S., Cha, Y. N., Jang, H. S., & Hyung, H. K. (2010). Evaluation tool modification of problem-based learning classes for nursing student. *Jesus University Journal of Nursing*, 8(1), 21–33.